

## Sunglass Lens

For many years, glass was the most commonly used material in eyeglass lenses. Its principal advantage is that it resists scratching; its main disadvantage is that it is brittle and breakable.

Since 1972, when the Food and Drug Administration issued a regulation that all sunglass and prescription lenses must be shatter-resistant, use of plastic lenses has increased dramatically; today the majority of sunglass, corrective and safety lenses sold in the U.S. are made of plastic. Plastic lenses typically weigh only half as much as glass, they can be readily shaped to conform to facial contours, and they offer far better absorption of ultraviolet rays. But even with delicate handling, many types of plastic lenses develop visibility-reducing scratches. Until recently, the best plastic available fell far short of glass in scratch resistance.

Foster Grant Corporation, Leominster, Massachusetts, a major producer of sunglasses, spent more than a decade of research effort looking for a coating that would provide plastic lenses with glass-like scratch resistance while maintaining the advantageous properties of plastics. The answer eventually found combined NASA technology with Foster Grant's own technology. The NASA contribution was a highly abrasion-resistant coating developed by Ames Research Center as a means of protecting plastic surfaces of aerospace equipment from the sometimes harsh environments to which they are subjected. The result is the Foster Grant SPACE TECH Lens, manufactured under license from NASA. Illustrated in the accompanying photos, the SPACE TECH Lens surpasses glass in scratch resistant properties and has five times better scratch resistance than the most popular corrective lenses. The new lens is available in the 1984 Foster Grant line.



**A** "space-tech" lens from NASA offers scratch resistant and shatter resistant lenses.

What is the "space-tech" lens? For many years, the standard lens used for sunglasses was glass. Glass lenses are strong and clear, but they are heavy and can shatter if they are hit hard.

In recent years, many types of plastic lenses have been developed. These lenses are lighter and more comfortable to wear, but they are not as strong as glass. They can scratch easily and they can shatter if they are hit hard.

The new "space-tech" lens is made of a special plastic. It is as strong as glass and it is as clear as glass. It is also very scratch resistant. It can withstand the most severe conditions of use without being scratched.

test of dangerous ultraviolet rays. And so resistant to shattering.

But one problem remained: scratching.

Even with delicate handling, some plastic lenses seem to scratch faster than very fine glass. After a few months' use, a fine, white, hair-like mark may appear on the lens. These marks are the result of tiny scratches that have formed on the lens's surface.

All plastic lenses seem to have some degree of scratch resistance. But the new "space-tech" lens is different. It has five times better scratch resistance than the most popular corrective lenses.

Research and development

When you wear plastic lenses, the most common problem is scratching. And the most common cause of scratching is the way you handle your lenses. If you touch your lenses with your fingers, you can scratch them. If you clean your lenses with a rough cloth, you can scratch them. If you store your lenses in a case that is not clean, you can scratch them.

To keep your lenses from being scratched, you should handle them carefully. You should clean them with a soft cloth. You should store them in a clean case.

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### THE NEW SPACE TECH LENS